

**Oregon Department of Environmental Quality
2021 American Rescue Plan (ARP) Grant
Budget Detail & Supplemental Notes**

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY									
2021 American Rescue Plan (ARP) Grant									
Enhanced Air Quality Monitoring for Communities									
	Qty	Unit	Unit Rate		General	Other	Federal	Total	
1 PERSONAL SERVICES (PS)									
PRINCIPAL EXECUTIVE/MANAGER E, AP, MMS, Step 9, Loc - H&R	0.39	mo. @	\$9,896 / mo.		3,859	-	-	3,859	
PRINCIPAL EXECUTIVE/MANAGER E, AP, MMS, Step 9, Loc - LA	0.39	mo. @	\$9,896 / mo.		3,859	-	-	3,859	
NATURAL RESOURCE SPECIALIST 5, AP, AD, Step 9, Loc - H&R	2.52	mo. @	\$9,027 / mo.		22,748	-	-	22,748	
PUBLIC AFFAIRS SPECIALIST 2, AP, AD, Step 9, Loc - H&R	14.61	mo. @	\$7,811 / mo.		114,119	-	-	114,119	
NATURAL RESOURCE SPECIALIST 3, AP, AD, Step 9, Loc - LAB	12.95	mo. @	\$7,102 / mo.		91,971	-	-	91,971	
NATURAL RESOURCE SPECIALIST 4, AP, AD, Step 9, Loc - H&R	23.00	mo. @	\$8,195 / mo.		188,485	-	-	188,485	
Subtotal Salaries					\$425,041	\$0	\$0	\$425,041	
2 FRINGE BENEFITS (Fringe)									
PRINCIPAL EXECUTIVE/MANAGER E, AP, MMS, Step 9, Loc - H&R	3,859	@	39.52% * Sal.		1,525	-	-	1,525	
PRINCIPAL EXECUTIVE/MANAGER E, AP, MMS, Step 9, Loc - LA	3,859	@	39.52% * Sal.		1,525	-	-	1,525	
NATURAL RESOURCE SPECIALIST 5, AP, AD, Step 9, Loc - H&R	22,748	@	40.93% * Sal.		9,311	-	-	9,311	
PUBLIC AFFAIRS SPECIALIST 2, AP, AD, Step 9, Loc - H&R	114,119	@	43.47% * Sal.		49,607	-	-	49,607	
NATURAL RESOURCE SPECIALIST 3, AP, AD, Step 9, Loc - LAB	91,971	@	45.35% * Sal.		41,708	-	-	41,708	
NATURAL RESOURCE SPECIALIST 4, AP, AD, Step 9, Loc - H&R	188,485	@	42.59% * Sal.		80,270	-	-	80,270	
Subtotal Benefits					\$183,946	\$0	\$0	\$183,946	
<i>Fringe Rates: Are shown as a percentage of Personal Service Salary Amounts, and comprised of a combination of several factors such as FICA/Medicare, Worker's Comp., Pension Costs, Medical/Dental, etc.</i>									
3 TRAVEL (see attached travel detail)									
In-State Travel					-	-	-	-	
Out-State Travel					-	-	-	-	
Training Related Travel		mo. @ \$38 H&R / \$27 VIP / \$3 Lab Per Pos/Month			-	-	-	-	
Subtotal Travel					-	-	-	-	
4 EQUIPMENT					\$0	\$0	\$232,726	\$232,726	
5 SUPPLIES									
Supplies and Expendable Property	53.86	mo. @ \$164 H&R / \$1447 VIP / \$276 Lab Per Pos/Month			\$10,327	\$0	\$0	\$10,327	
Subtotal Supplies					\$10,327	\$0	\$0	\$10,327	
6 CONTRACTUAL:					\$0	\$0	\$0	\$0	
7 CONSTRUCTION					\$0	\$0	\$0	\$0	
8 OTHER SERVICES									
Other Expenses	53.86	mo. @ \$1343 H&R / \$753 VIP / \$2629 Lab Per Pos/Month			89,489	-	-	89,489	
Sub Awards									
Payments to Other Government Units					-	-	61,570	61,570	
Payments to Non Government Units					-	-	204,500	204,500	
Subtotal Other Services					89,489	-	266,070	355,559	
9 OVERHEAD / INDIRECT					\$126,060	\$0	\$0	\$126,060	
10 TOTAL PROJECT COST					\$834,863	\$0	\$498,796	\$1,333,659	

1. Personal Services

The Enhanced Air Quality Monitoring for Communities grant will be supported by in-kind support. Based on an analysis of staff involved in this grant's work, DEQ used the following representative classification types to develop the grant personal services budget: Principal Manager E, Natural Resource Specialist 5, Public Affairs Specialist 2, Natural Resource Specialist 3, and Natural Resource Specialist 4. DEQ estimates this grant will be supported by 53.86 months of work (2.244 FTE). Months of work and biennial FTE are rounded for display purposes.

2. Fringe Benefits

Fringe benefits are shown as a percentage of personal service salary amounts and comprised of a combination of several factors such as FICA/Medicare = 7.65%, Pension Costs = 16.39%, mass transit tax (non-federal only) = 0.60%, Medical/Dental, Workman's Comp., and Unemployment = \$1,471/month.

3. Travel

This request does not include Travel costs.

4. Equipment

This request includes equipment costs for an AethLabs microaeth 300, Purple Air PA-II Monitors, and an Anemometer weather station. The microaeth costs \$214,450, which includes instrument maintenance, spare parts, and repairs. The Purple Air PA-II Monitors cost \$12,276, which includes breakdown replacement. The Anemometer weather station costs \$6,000.

5. Supplies

The costs in "Supplies" have been updated and are based on annualized actual historical costs for the rolled-up categories required by EPA for planning and reporting. These estimates are derived from a wide range of different DEQ program activities. Some specific activities have higher costs in some categories, whereas others have lower costs. On the average, however, our estimates for Total Supplies costs are close to the costs actually incurred in the course of completing our work. None of the costs within this category are included in the indirect rate.

Office Supplies

Supplies, postage, forms, stationery, office reproduction supplies, data processing supplies and other miscellaneous office supplies.

Laboratory and Field Supplies

Glassware, standards, first aid supplies, personal protective equipment, gases, solvents and other miscellaneous laboratory and field supplies.

Expendable Property & IT Expendable Property

Reusable items purchased for under \$5,000 (and that have a useful life beyond a year) are categorized as expendable property. Items typically found in this category are personal computers and related software, and office furniture.

6. Contractual

This request does not include Contractual costs.

7. Construction

This request does not include Construction costs.

8. Other

The service costs in "Other" have been updated and are based on annualized actual historical costs for the rolled-up categories required by EPA for planning and reporting. These estimates are derived from a wide range of different DEQ program activities. Some specific activities have higher costs in some categories, whereas others have lower costs. On the average, however, our estimates for Total Other costs are close to the costs actually incurred in the course of completing our work. None of the costs within this category are included in the indirect rate.

Employee Training, including tuition, books, periodicals, other training materials, and professional associations.

Telecommunications support and services, including voice, network and teleconferencing.

Computer technology support and data processing services, including computer mainframe support, server support, peripheral support, and computer processing support.

Utilities

Facilities and vehicle rental and maintenance, including janitorial services. Facilities rental for DEQ's laboratory is fully funded by state general fund and lottery fund; therefore, DEQ's cost estimates do not include facilities rental for the laboratory on federal funds.

Other Services

- Postal & delivery services
- Other miscellaneous office services (such as publishing and print services, subscriptions, laundry services, equipment relocation)
- Rental and repair of office and technical equipment
- Other miscellaneous services (medical, catering, fire inspection, alarm monitoring, shredding, etc...)

Payments to Non-Government Units

Subawards to Neighbors for Clean Air for building community capacity and implementation of community monitoring in 4 Oregon communities. Subawards to Desert Research Institute for data management. Subawards to Portland State University (PSU) for project performance evaluation.

9. Overhead/Indirect

The indirect rate of 20.70% is documented in an indirect cost rate approved by EPA in a letter dated July 8, 2021. Indirect costs are DEQ central service costs such as Human Resources, Accounting and the Information Technology sections and are separate from other budget categories listed above, as documented in our indirect cost rate agreement with EPA.

Preaward Compliance Review Report for All Applicants and Recipients Requesting EPA Financial Assistance

Note: Read Instructions before completing form.

I. A. Applicant/Recipient (Name, Address, City, State, Zip Code)

Name:

Address:

City:

State: Zip Code:

B. DUNS No.

II. Is the applicant currently receiving EPA Assistance? ☒ Yes ☐ No

III. List all civil rights lawsuits and administrative complaints pending against the applicant/recipient that allege discrimination based on race, color, national origin, sex, age, or disability. (Do not include employment complaints not covered by 40 C.F.R. Parts 5 and 7.)

IV. List all civil rights lawsuits and administrative complaints decided against the applicant/recipient within the last year that allege discrimination based on race, color, national origin, sex, age, or disability and enclose a copy of all decisions. Please describe all corrective actions taken. (Do not include employment complaints not covered by 40 C.F.R. Parts 5 and 7.)

V. List all civil rights compliance reviews of the applicant/recipient conducted by any agency within the last two years and enclose a copy of the review and any decisions, orders, or agreements based on the review. Please describe any corrective action taken. (40 C.F.R. § 7.80(c)(3))

VI. Is the applicant requesting EPA assistance for new construction? If no, proceed to VII; if yes, answer (a) and/or (b) below.

☐ Yes ☒ No

a. If the grant is for new construction, will all new facilities or alterations to existing facilities be designed and constructed to be readily accessible to and usable by persons with disabilities? If yes, proceed to VII; if no, proceed to VI(b).

☐ Yes ☐ No

b. If the grant is for new construction and the new facilities or alterations to existing facilities will not be readily accessible to and usable by persons with disabilities, explain how a regulatory exception (40 C.F.R. 7.70) applies.

VII. Does the applicant/recipient provide initial and continuing notice that it does not discriminate on the basis of race, color, national origin, sex, age, or disability in its program or activities? (40 C.F.R. 5.140 and 7.95)

☒ Yes ☐ No

a. Do the methods of notice accommodate those with impaired vision or hearing?

☒ Yes ☐ No

b. Is the notice posted in a prominent place in the applicant's offices or facilities or, for education programs and activities, in appropriate periodicals and other written communications?

☒ Yes ☐ No

c. Does the notice identify a designated civil rights coordinator?

☒ Yes ☐ No

VIII. Does the applicant/recipient maintain demographic data on the race, color, national origin, sex, age, or handicap of the population it serves? (40 C.F.R. 7.85(a))

☒ Yes ☐ No

IX. Does the applicant/recipient have a policy/procedure for providing access to services for persons with limited English proficiency? (40 C.F.R. Part 7, E.O. 13166)

☒ Yes ☐ No

- X. If the applicant is an education program or activity, or has 15 or more employees, has it designated an employee to coordinate its compliance with 40 C.F.R. Parts 5 and 7? Provide the name, title, position, mailing address, e-mail address, fax number, and telephone number of the designated coordinator.**

Sue Korn, 700 NE Multnomah St., Ste 600, Portland, OR 97232

- XI. If the applicant is an education program or activity, or has 15 or more employees, has it adopted grievance procedures that assure the prompt and fair resolution of complaints that allege a violation of 40 C.F.R. Parts 5 and 7? Provide a legal citation or Internet Address for, or a copy of, the procedures.**

<http://www.oregon.gov/das/policies/50-010-01.pdf>

For the Applicant/Recipient

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. I assure that I will fully comply with all applicable civil rights statutes and EPA regulations.

A. Signature of Authorized Official

Heather Kell

B. Title of Authorized Official

Director

C. Date

03/25/2022

For the U.S. Environmental Protection Agency

I have reviewed the information provided by the applicant/recipient and hereby certify that the applicant/recipient has submitted all preaward compliance information required by 40 C.F.R. Parts 5 and 7; that based on the information submitted, this application satisfies the preaward provisions of 40 C.F.R. Parts 5 and 7; and that the applicant has given assurance that it will fully comply with all applicable civil rights statutes and EPA regulations.

A. *Signature of Authorized EPA Official

B. Title of Authorized Official

C. Date

*** See Instructions**

Instructions for EPA FORM 4700-4 (Rev. 06/2014)

General. Recipients of Federal financial assistance from the U.S. Environmental Protection Agency must comply with the following statutes and regulations.

Title VI of the Civil Rights Acts of 1964 provides that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. The Act goes on to explain that the statute shall not be construed to authorize action with respect to any employment practice of any employer, employment agency, or labor organization (except where the primary objective of the Federal financial assistance is to provide employment). Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act provides that no person in the United States shall on the ground of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under the Federal Water Pollution Control Act, as amended. Employment discrimination on the basis of sex is prohibited in all such programs or activities. Section 504 of the Rehabilitation Act of 1973 provides that no otherwise qualified individual with a disability in the United States shall solely by reason of disability be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. Employment discrimination on the basis of disability is prohibited in all such programs or activities. The Age Discrimination Act of 1975 provides that no person on the basis of age shall be excluded from participation under any program or activity receiving Federal financial assistance. Employment discrimination is not covered. Age discrimination in employment is prohibited by the Age Discrimination in Employment Act administered by the Equal Employment Opportunity Commission. Title IX of the Education Amendments of 1972 provides that no person in the United States on the basis of sex shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance. Employment discrimination on the basis of sex is prohibited in all such education programs or activities. Note: an education program or activity is not limited to only those conducted by a formal institution. 40 C.F.R. Part 5 implements Title IX of the Education Amendments of 1972. 40 C.F.R. Part 7 implements Title VI of the Civil Rights Act of 1964, Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act, and Section 504 of The Rehabilitation Act of 1973. The Executive Order 13166 (E.O. 13166) entitled; "Improving Access to Services for Persons with Limited English Proficiency" requires Federal agencies work to ensure that recipients of Federal financial assistance provide meaningful access to their LEP applicants and beneficiaries.

Items "Applicant" means any entity that files an application or unsolicited proposal or otherwise requests EPA assistance. 40 C.F.R. §§ 5.105, 7.25. "Recipient" means any entity, other than applicant, which will actually receive EPA assistance. 40 C.F.R. §§ 5.105, 7.25. "Civil rights lawsuits and administrative complaints" means any lawsuit or administrative complaint alleging discrimination on the basis of race, color, national origin, sex, age, or disability pending or decided against the applicant and/or entity which actually benefits from the grant, but excluding employment complaints not covered by 40 C.F.R. Parts 5 and 7. For example, if a city is the named applicant but the grant will actually benefit the Department of Sewage, civil rights lawsuits involving both the city and the Department of Sewage should be listed. "Civil rights compliance review" means any review assessing the applicant's and/or recipient's compliance with laws prohibiting discrimination on the basis of race, color, national origin, sex, age, or disability. Submit this form with the original and required copies of applications, requests for extensions, requests for increase of funds, etc. Updates of information are all that are required after the initial application submission. If any item is not relevant to the project for which assistance is requested, write "NA" for "Not Applicable." In the event applicant is uncertain about how to answer any questions, EPA program officials should be contacted for clarification. * Note: Signature appears in the Approval Section of the EPA Comprehensive Administrative Review For Grants/Cooperative Agreements & Continuation/Supplemental Awards form.



EPA KEY CONTACTS FORM

OMB Number: 2030-0020
Expiration Date: 06/30/2024

Authorized Representative: *Original awards and amendments will be sent to this individual for review and acceptance, unless otherwise indicated.*

Name:	Prefix:	First Name:	Middle Name:
		Melinda	
	Last Name:		Suffix:
	Mahoney		
Title:	AQ Analyst		
Complete Address:			
Street1:	700 NE Multnomah St Ste 600		
Street2:			
City:	Portland	State:	OR: Oregon
Zip / Postal Code:	97232	Country:	USA: UNITED STATES
Phone Number:	503-229-5397	Fax Number:	
E-mail Address:	Melinda.MAHONEY@deq.oregon.gov		

Payee: *Individual authorized to accept payments.*

Name:	Prefix:	First Name:	Middle Name:
		AnneMarie	
	Last Name:		Suffix:
	Murphy		
Title:	Accounting Manager		
Complete Address:			
Street1:	700 NE Multnomah St Ste 600		
Street2:			
City:	Portland	State:	OR: Oregon
Zip / Postal Code:	97232	Country:	USA: UNITED STATES
Phone Number:	503-229-6014	Fax Number:	
E-mail Address:	AnneMarie.MURPHY@deq.oregon.gov		

Administrative Contact: *Individual from Sponsored Programs Office to contact concerning administrative matters (i.e., indirect cost rate computation, rebudgeting requests etc).*

Name:	Prefix:	First Name:	Middle Name:
		Mike	
	Last Name:		Suffix:
	Premo		
Title:	CSD-Budget Manager		
Complete Address:			
Street1:	700 NE Multnomah St Ste 600		
Street2:			
City:	Portland	State:	OR: Oregon
Zip / Postal Code:	97232	Country:	USA: UNITED STATES
Phone Number:	503-229-5938	Fax Number:	
E-mail Address:	Michael.PREMO@deq.oregon.gov		

EPA KEY CONTACTS FORM

Project Manager: *Individual responsible for the technical completion of the proposed work.*

Name: **Prefix:** **First Name:** **Middle Name:**

Last Name: **Suffix:**

Title:

Complete Address:

Street1:

Street2:

City:

State:

Zip / Postal Code:

Country:

Phone Number:

Fax Number:

E-mail Address:

Other Attachment File(s)

* Mandatory Other Attachment Filename:

Add Mandatory Other Attachment

Delete Mandatory Other Attachment

View Mandatory Other Attachment

To add more "Other Attachment" attachments, please use the attachment buttons below.

Add Optional Other Attachment

Delete Optional Other Attachment

View Optional Other Attachment

Project Narrative File(s)

* **Mandatory Project Narrative File Filename:**

Add Mandatory Project Narrative File

Delete Mandatory Project Narrative File

View Mandatory Project Narrative File

To add more Project Narrative File attachments, please use the attachment buttons below.

Add Optional Project Narrative File

Delete Optional Project Narrative File

View Optional Project Narrative File

BUDGET INFORMATION - Non-Construction Programs

OMB Number: 4040-0006
Expiration Date: 02/28/2022

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. Enhanced Air Quality Monitoring for Communities	66.034	\$	\$	498,796.00	0.00	498,796.00
2. Enhanced Air Quality Monitoring for Communities - In- Kind Support	66.034				834,863.00	834,863.00
3.						
4.						
5. Totals		\$	\$	498,796.00	834,863.00	1,333,659.00

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SECTION B - BUDGET CATEGORIES

6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY				Total (5)
	(1)	(2)	(3)	(4)	
	Enhanced Air Quality Monitoring for Communities	Enhanced Air Quality Monitoring for Communities - In-Kind Support			
a. Personnel	\$ 0.00	\$ 425,041.00	\$	\$	\$ 425,041.00
b. Fringe Benefits	0.00	183,946.00			183,946.00
c. Travel	0.00	0.00			0.00
d. Equipment	232,726.00	0.00			232,726.00
e. Supplies	0.00	10,327.00			10,327.00
f. Contractual	0.00	0.00			0.00
g. Construction	0.00	0.00			0.00
h. Other	266,070.00	89,489.00			355,559.00
i. Total Direct Charges (sum of 6a-6h)	498,796.00	708,803.00			\$ 1,207,599.00
j. Indirect Charges	0.00	126,060.00			\$ 126,060.00
k. TOTALS (sum of 6i and 6j)	\$ 498,796.00	\$ 834,863.00	\$	\$	\$ 1,333,659.00
7. Program Income	\$	\$	\$	\$	\$

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SECTION C - NON-FEDERAL RESOURCES				
(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e)TOTALS
8. Enhanced Air Quality Monitoring for Communities - In-Kind Support	\$ <input type="text"/>	\$ <input type="text" value="834,863.00"/>	\$ <input type="text"/>	\$ <input type="text" value="834,863.00"/>
9. <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
10. <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
11. <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
12. TOTAL (sum of lines 8-11)	\$ <input type="text"/>	\$ <input type="text" value="834,863.00"/>	\$ <input type="text"/>	\$ <input type="text" value="834,863.00"/>

SECTION D - FORECASTED CASH NEEDS					
	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
13. Federal	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
14. Non-Federal	\$ <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
15. TOTAL (sum of lines 13 and 14)	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>

SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT				
(a) Grant Program	FUTURE FUNDING PERIODS (YEARS)			
	(b)First	(c) Second	(d) Third	(e) Fourth
16. <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
17. <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
18. <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
19. <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
20. TOTAL (sum of lines 16 - 19)	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>

SECTION F - OTHER BUDGET INFORMATION	
21. Direct Charges: <input type="text"/>	22. Indirect Charges: <input type="text" value="20.70% calculated as a % of Salary & Fringe"/>
23. Remarks: <input type="text"/>	

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Application for Federal Assistance SF-424

* 1. Type of Submission:

- ☐ Preapplication
☒ Application
☐ Changed/Corrected Application

* 2. Type of Application:

- ☒ New
☐ Continuation
☐ Revision

* If Revision, select appropriate letter(s):

* Other (Specify):

* 3. Date Received:

03/25/2022

4. Applicant Identifier:

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name:

Oregon Department of Environmental Quality

* b. Employer/Taxpayer Identification Number (EIN/TIN):

93-0584915

* c. Organizational DUNS:

8095797090000

d. Address:

* Street1:

700 NE Multnomah St Suite 600

Street2:

* City:

Portland

County/Parish:

* State:

OR: Oregon

Province:

* Country:

USA: UNITED STATES

* Zip / Postal Code:

97232-4100

e. Organizational Unit:

Department Name:

Dept of Environmental Quality

Division Name:

CSD-Financial Svcs/Budget/AQ

f. Name and contact information of person to be contacted on matters involving this application:

Prefix:

* First Name:

Svetlana

Middle Name:

* Last Name:

Lazarev

Suffix:

Title: Air Quality Modeling Specialist

Organizational Affiliation:

* Telephone Number:

503-229-5973

Fax Number:

* Email:

svetlana.lazarev@deq.oregon.gov

Application for Federal Assistance SF-424

* 9. Type of Applicant 1: Select Applicant Type:

A: State Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

* 10. Name of Federal Agency:

Environmental Protection Agency

11. Catalog of Federal Domestic Assistance Number:

66.034

CFDA Title:

Surveys, Studies, Research, Investigations, Demonstrations, and Special Purpose Activities
Relating to the Clean Air Act

* 12. Funding Opportunity Number:

EPA-OAR-OAQPS-22-01

* Title:

Enhanced Air Quality Monitoring for Communities

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

Add Attachment

Delete Attachment

View Attachment

* 15. Descriptive Title of Applicant's Project:

OR DEQ Data to Action: Building a collaborative community framework for cleaner air

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

Application for Federal Assistance SF-424**16. Congressional Districts Of:*** a. Applicant * b. Program/Project

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment

Delete Attachment

View Attachment

17. Proposed Project:* a. Start Date: * b. End Date: **18. Estimated Funding (\$):**

* a. Federal	<input type="text" value="498,796.00"/>
* b. Applicant	<input type="text" value="0.00"/>
* c. State	<input type="text" value="834,863.00"/>
* d. Local	<input type="text" value="0.00"/>
* e. Other	<input type="text" value="0.00"/>
* f. Program Income	<input type="text" value="0.00"/>
* g. TOTAL	<input type="text" value="1,333,659.00"/>

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

- ☐ a. This application was made available to the State under the Executive Order 12372 Process for review on .
- ☒ b. Program is subject to E.O. 12372 but has not been selected by the State for review.
- ☐ c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**☐ Yes ☒ No

If "Yes", provide explanation and attach

Add Attachment

Delete Attachment

View Attachment

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

☒ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix: * First Name:

Middle Name:

* Last Name:

Suffix:

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I. COVER PAGE

Project Title: Data to Action: Building a collaborative community framework for cleaner air

Applicant: Oregon Department of Environmental Quality (DEQ), Air Quality Division
700 NE Multnomah St., Suite 600; Portland OR 97232

Contact: Ali Mirzakhali, Air Quality Administrator, (503)-229-5041, ali.mirzakhali@deq.oregon.gov

DUNS: 807579709

Set-Aside: None

Brief Description of Applicant Organization: Oregon Department of Environmental Quality works to protect the environmental quality of Oregon and seeks to be a leader in restoring, maintaining, and enhancing the quality of Oregon's air, land, and water.

Project Partners: Desert Research Institute (Jonathan Callahan), Neighbors for the Clean Air (Mary Peveto), Portland State University (Brianne Suldozsky), Beyond Toxics (Lisa Arkin), City of Portland-Bureau of Planning and Sustainability (Christine Kendrick), Confederated Tribes of Coos, Lower Umpqua and Siuslaw Indians (Lee Ann Wander), Lane Regional Air Protection Agency (Steven Dietrich), Oregon Council of Local Health Officials (Bill Emminger), Oregon Health Authority (Ali Hamade), Portland Downtown Neighbor Association (Robert Wright), and Rogue Valley Council of Governments (Ann Marie Alfrey)

Project Location: Urban, rural, and tribal Oregon communities, as prioritized by community-developed criteria

Air Pollutant Scope: Fine particulate matter (PM2.5) and hazardous air pollutant diesel particulate matter (DPM)

Budget Summary:

EPA Funding Requested	Total Project Cost
\$498,796	\$1,333,659

Project Period: November 1, 2022 to October 31, 2025 (3-year period)

Short Project Description: PM2.5 and DPM pose a health risk to all Oregonians, but disproportionately impact Black and Asian communities, children under the age of five years, and linguistically isolated populations. DEQ will work with communities, universities, and local and state agencies to co-design an equitable and sustainable community monitoring framework for collaborative action. This framework will be used to empower communities - prioritizing underserved, disadvantaged and overburdened communities – to monitor and leverage the data to inform action that will improve their local air quality.

II. WORKPLAN

Section 1 – Project Summary and Approach

A. Overall Project

Communities in Oregon are eager to learn more about what is in their local air and to develop local strategies that will improve their air quality, over and above the protection provided by the Clean Air Act and the State's Cleaner Air Oregon program. Oregon communities are most concerned about PM2.5 and DPM which is reflected in the increased requests to DEQ for monitoring and policy changes. DEQ's review of scientific literature, internal data analysis, and experience validate community concerns around these air pollutants.

DEQ, in collaboration with strategic community partners, universities, local and state-level agencies, will create an equitable and sustainable framework for community monitoring of local air quality. This framework will act as a catalyst to empower communities by increasing access to community-level information that can inform action to reduce human health risks from air pollution. In addition, the framework will augment DEQ's existing air quality monitoring efforts and supplements Oregon's regulatory framework.

DEQ has recruited strategic partners to engage underserved communities in the design of the program, manage air monitor data, and evaluate the program using qualitative and quantitative performance measures.

- Neighbors for Clean Air (NCA) will work with underserved and disadvantaged communities to ensure their voice is represented in the design and implementation of this program.

- Dr. Jonathan Callahan, Desert Research Institute, will help automate data management and quality assurance. His expertise in user experience design will ensure data is delivered in a format that is accessible and actionable.
- Dr. Brianne Suldovsky, Portland State University, will partner with DEQ and community representatives to identify performance measures and create an evaluation strategy that includes equity in design and implementation, community engagement, and education.
- DEQ will also collaborate with strategic community partners, universities, local and state-level agencies to create a Community Monitoring Advisory Group to design, implement and evaluate the project.

The key objective for this effort is to design an equitable and sustainable monitoring framework that will empower communities to collaboratively collect and transform monitoring data into action.

Objective 1: Build capacity for co-designing framework and participating in community-scale monitoring

An equitable framework for community monitoring requires that all communities are aware of and have the resources to participate in this effort. Thus, DEQ's first objective is to build awareness and data capacity so Oregon communities can participate in co-designing, deploying the monitors and transforming data into action to improve local air quality. DEQ is taking a three-pronged approach in communicating information needed for building community awareness and capacity about this opportunity.

First, DEQ will use its website, social media, and GovDelivery to inform Oregonians about this opportunity. DEQ will create communication deliverables and resources in multiple languages to address accessibility issues and proactively target diverse channels and organizations. Second, DEQ will work with a contractor for outreach to rural and remote communities that may lack internet connectivity or not have a history of engagement by government agencies. Third, DEQ will partner with NCA to coordinate outreach to historically underserved and under-resourced communities through advocacy groups such as Verde, Unite Oregon and NAYA.

Using these three channels, DEQ will:

- (i) Build awareness of the co-designing opportunity:* All dates and materials for the co-designing opportunity will be made available via all three channels in a timely manner.
- (ii) Improve data literacy and accessibility for community monitoring:* DEQ is working to make air quality data more accessible to communities by developing air quality information modules (an "AQ 101" series), building an air pollution dashboard, and using the web and social media to make air pollution information more accessible. DEQ will produce training materials in multiple languages on how PM2.5 and DPM sensors work and how to interpret the data from these sensors. Additionally, DEQ will compile a curated set of successfully completed community air quality monitoring projects, within and outside of Oregon, to give communities a sense of how community monitoring can inform community action.
- (iii) Increase resource availability for community monitoring and action:* DEQ is especially concerned that overburdened, underserved, and disadvantaged communities may not have the time or resources to access the community monitoring framework. DEQ will foster collaborations with underserved and disadvantaged communities and their local universities to enable community monitoring efforts.
- (iv) Track metrics and process improvement:* It is important for DEQ to track how well we are doing in our outreach. We will use website analytics and qualitative feedback to evaluate outreach to rural, remote, underserved, and disadvantaged communities. DEQ will develop metrics and adaptive processes in conjunction with our community partners to assess and improve our outreach.

Objective 2: Co-design an equitable and sustainable framework for collaborative community monitoring

DEQ is planning three phases to co-design the community monitoring framework to ensure equity:

- (i) Identify community priorities, needs and concerns during planning:* DEQ will hold listening sessions to identify community priorities, needs, and concerns regarding local air quality and monitoring. Once community priorities and needs have been identified, DEQ will partner with neighborhood associations, local government agencies, tribes, universities, nonprofits, and grassroots organization to form a Community Monitoring Advisory Group.

The Community Monitoring Advisory Group will plan and host seven half-day workshop to co-design an equitable and sustainable community monitoring framework. The workshop will enable active and inclusive participation and representation for all Oregon communities.

(ii) Co-design the community monitoring framework: DEQ will use a workshop model for co-designing the community monitoring framework. DEQ received multiple letters of support and will continue targeted outreach to underserved and disadvantaged, rural and remote university and state and local agency representatives as co-designing participants. DEQ will provide stipends to compensate for community representation and to remove financial barriers to participation.

The co-designing workshop will consist of six half-day sessions spread out over six months to ensure attendees have time to engage their communities between workshop sessions. Workshop sessions will be organized to address community priorities. Sessions will be open to the public, with time set aside for public input. All workshop materials will be made publicly available via the channels described in Objective (1). The co-designing workshop will produce an equitable and sustainable community monitoring framework including community prioritization protocols, implementation guidance and evaluation strategy.

(iii) Release and publicize the co-designed community monitoring framework: The seventh session will be an in-person meeting to release and publicize the framework. All information and resources created will be available online and through NCA and our partner for outreach to rural and remote communities.

Objective 3: Establish a library of PM2.5 and DPM sensors to support community monitoring

DEQ will maintain a library of commercially available instruments to support community monitoring.

(i) Set up the instrumentation: The community monitoring instrument library will start out with 40 Purple Airs to monitor PM2.5 and 10 micro-aethalometers from Aethlab to monitor black carbon (or DPM). The multi-channel micro-aethalometers will also determine the relative contributions of biomass burning and fossil fuel combustion to PM2.5. The library will include 10 weather stations to determine wind speed and direction to help distinguish between local and distant sources.

(ii) Build instrumentation calibration, maintenance, deployment, and QA/QC protocols: Studies done by both the DEQ Lab and the Sustainable Atmospheres Research Lab (STAR Lab) at Portland State University (Orlando, 2018) indicate that Purple Airs track PM2.5 well, but each sensor has a unique calibration equation (slope and offset). DEQ will calibrate the Purple Airs annually and maintain a repository of the calibrations for each Purple Air. DEQ will work with Dr. Callahan to develop an extension to the AirSensor R package to automate the process of downloading Purple Air data, applying the sensor-specific calibration, and uploading the calibrated PM2.5 readings to DEQ's community monitoring data and visualization portal. DEQ will also develop procedures for maintaining instruments in the library and for safely transporting instruments to and from the community.

(iii) Create instrument and data usage guides for community monitoring projects: DEQ will develop and provide guides on how to use the instruments in the field and how to upload data from the instruments to DEQ's data management system.

(iv) Build data and visualization infrastructure to make community monitoring data accessible: DEQ will work with Dr. Callahan to develop a data portal where data from community monitoring projects can be viewed and downloaded. Visualizations will include graphs and maps that make the monitoring data more accessible and easier to interpret and apply.

Objective 4: Implement community monitoring projects using the framework

Once the community monitoring framework, instrument library, and data management protocols are established, DEQ and partners will implement the community monitoring framework. The framework will include guidance to ensure a successful community engagement. DEQ anticipates the following implementation steps:

(i) Call for community monitoring interest and prioritize communities based on the framework

(ii) *Deploy the community monitoring framework in four communities:* DEQ will follow the framework guidelines:

- Identify community host (or partner to host with the community) and convene a local advisory group to design the monitoring effort targeted at the community's air quality needs
- Collaboratively monitor with community members, stakeholders, partners, and the advisory committee
- Provide air quality monitoring and policy expertise to advisory committee
- Track metrics of community engagement
- Adapt and modify processes to meet community need

Objective 5: Evaluate the framework for equity, sustainability, and effectiveness in improving local air quality

DEQ sees the co-designed community monitoring framework as an equitable, sustainable, flexible and effective supplement to its monitoring network. Dr. Suldovsky will evaluate the framework and provide feedback to DEQ and partners on how it might be improved. The evaluation will be ongoing and iterative. Opportunities for community members and partners to provide direct feedback on processes and outcomes will be provided for Objectives 1-3 through the aforementioned mediums – the DEQ website, social media, and Gov Delivery. Dr. Suldovsky will collect feedback from community partners throughout the duration of the project and evaluate using social scientific data collection (including interviews, focus groups, and surveys) to assess community perspectives on air quality monitoring efforts, technical expertise, and engagement processes and outcomes. Feedback will be used by DEQ to improve ongoing engagement and in assessing the equity, sustainability and effectiveness of the community monitoring framework.

B. Project Significance

This project addresses community concerns about PM_{2.5} and DPM in their local air. Both these air pollutants pose a significant health risk to Oregonians. Bowe et al (2019) report that PM_{2.5} may be leading to ~2300 premature deaths annually in Oregon; despite Oregon being in attainment of the PM_{2.5} NAAQS. Health risk from PM_{2.5} is further heightened by the increasing number and intensity of wildfire events in the Pacific Northwest. DEQ's analysis of cancer risk from air toxics (based on NATA 2014) shows that DPM is in the top 5 cancer risk drivers in 80% of the census tracts in Oregon, with a state-wide average cancer risk estimated at an extra 3 cases of cancer/million people over a lifetime of exposure (based on Oregon's DPM TRV of 0.1 µg/m³); the estimated cancer risk would exceed 300 cases/million over a lifetime of exposure based on neighboring California's unit risk value of 8.94×10^{-4} µg/m³.

DEQ's analysis shows that the benefits of cleaner air are not uniformly distributed for all Oregonians. Black and Asian communities are exposed to higher levels of PM_{2.5} than the state average (6.3 µg /m³ vs. 6.2 µg /m³ vs. 5.8 µg /m³) and face greater cancer risk from DPM (6.1 cases/million vs. 5.4 cases/million vs 3.8 cases/million). The linguistically isolated population also faces a greater air pollution burden. Therefore, this project will establish a collaborative and inclusive framework for air quality monitoring to ensure community voice and equity. The design, implementation and evaluation of the monitoring framework will be created by and for communities. The community-driven monitoring framework will be designed to be equitable and sustainable, acknowledging historical disparities for environmental justice communities and ensuring inclusivity.

By bringing together diverse stakeholders with backgrounds ranging from community organizing to university research to local policy development, this project will begin a dialogue among air quality advocates and researchers across the state, for the betterment and more equitable implementation of air quality monitoring for residents of all communities in Oregon.

Local action to improve air quality begins with local data. A community's increased awareness and understanding of local PM_{2.5} and DPM pollution sources is the first step to identifying and adopting mitigation strategies to improve local air quality and health outcomes. Community advocates in Oregon have negotiated good neighbor agreements, petitioned DEQ to adopt rules regulating indirect sources, participated on rulemaking advisory committees, and joined coalitions to review and comment on regulatory actions.

Section 2 – Community Involvement

A. Community Partnerships

DEQ's proposal for an equitable and sustainable community monitoring framework will be co-designed, deployed and evaluated by Oregon communities. DEQ will engage neighborhood associations, advocacy groups, state agencies, and local health agencies to develop this community monitoring proposal. Initial stakeholder feedback has shaped the proposal to focus on environmental justice, rural, overburdened and Black, Indigenous and People of Color communities that are consistent with EPA's EJScreen and OR HB 4077.

DEQ will identify strategic community partners for a Community Monitoring Advisory Group to host a workshop for community representatives to design the community monitoring framework and community prioritization protocols for implementation. The workshop will consist of seven half-day working sessions focused on designing, implementing, and evaluating the program.

In addition to the advisory group, DEQ will also partner with Neighbors for Clean Air (NCA) to engage historically under-represented communities for feedback and input in the design of the program. NCA is a nonprofit organization and a known expert on community advocacy for air quality. DEQ will contract with NCA to coordinate engagement with rural, migrant workers, minority, and low-income communities to ensure their voice is represented in the design of this program.

NCA will also coordinate sub-contracts for key stakeholder groups to conduct outreach to their own constituents. DEQ has identified Verde and Unite Oregon as two organizations that will receive sub-contracts. Verde serves low-income communities by building environmental wealth through Social Enterprise, Outreach and Advocacy. Led by people of color, immigrants and refugees, rural communities, and people experiencing poverty, Unite Oregon works statewide to build a unified intercultural movement for justice. DEQ will work with NCA to identify additional partners to reach marginalized groups.

DEQ will partner with community leaders and organizations for implementation of the framework. The role of the community host for the monitoring program is to liaise with DEQ, engage local stakeholders (i.e., local health officials, parents, community groups) and convene their community to develop an action plan based on monitoring data. If a community does not have an organized entity to host the monitor library, DEQ will encourage partnerships with universities, nonprofits, and other communities to support a monitoring effort.

Dr. Suldovsky will create performance measures informed by the Community Monitoring Advisory Group and workshop and evaluate the pilot monitoring efforts. Dr. Suldovsky will work with community hosts to evaluate the program based on the defined performance measures and outcomes resulting from the workshop.

B. Community Engagement

Community engagement is the driving factor behind the proposed monitoring library framework. The Community Monitor Advisory Group will consist of representatives from Oregon's communities to inform the design, implementation and evaluation of the framework. Local agencies, advocacy groups, neighborhood associations and environmental groups will participate as representatives on the advisory group and in the workshop.

Diverse, rural, low-income and marginalized communities will be engaged to capture unique needs and invited to participate in the development of community monitor framework. Local community leaders will host the library of monitors and serve as conveners of local health officials, community groups, leaders and neighbors. Community engagement opportunities include the placement of the monitors, education opportunities and evaluation of data.

Transparency and access to data are a priority for this program. All program information, educational resources and data will be made available to the public. DEQ will have a designated website to provide all workshop materials, pilot locations, educational resources, and air monitoring data sets. In addition, each community monitoring effort will have a designated web page that includes community information, monitor strategy, access to data collected, and evaluation reports. DEQ will also track any resulting community

mitigation strategies and best practices. The information will be in plain language and accessible in multiple languages.

DEQ will also host virtual meetings to reconvene workshop participants and engage the public, local agencies, and other stakeholders. The meetings will provide overviews of specific community monitoring efforts, new resources, best practices, and evaluation results.

Section 3 – Environmental Justice and Underserved Communities

PM2.5 and DPM in Oregon continue to pose a health risk, despite an already established strong regulatory framework, especially in socio-economically disadvantaged communities. There are disproportionate burdens to Black Oregonians – who are exposed to ambient PM2.5 levels of 6.3 µg/m³ and diesel-driven excess cancer risk of 6.1 excess cases of cancer per million – and Oregonians of Asian heritage – who are exposed to ambient PM2.5 levels of 6.2 µg/m³ and diesel-driven excess cancer risk of 5.4 excess cases of cancer per million – both of which are higher than the statewide average of 5.9 µg/m³ of ambient PM2.5 and 3.9 diesel-driven excess cases of cancer. These communities are therefore both overburdened from an environmental pollution standpoint and are comprised of historically underserved and vulnerable groups from an environmental justice standpoint. Enabling these communities to supplement state-level policy action with local policy, mitigation and adaptation strategies takes on new urgency based on recent research that shows exposure to air pollution can worsen outcomes of inflammatory diseases, including COVID-19.

DEQ's proposal combines a library of low-cost PM2.5 and DPM sensors with development of a collaborative and equitable community engagement framework to ensure that underserved and overburdened communities are prioritized in the community monitoring process. These communities will be better able to identify air quality problems affecting them and better equipped to raise awareness within their communities about those problems. Communities will be able to use the information gained from these monitoring efforts to implement mitigation actions to reduce their exposure and protect their own health. The co-creation of the community monitoring framework will strengthen relationships among community-based organizations and state and local governments who may be assisting with implementation of policy and mitigatory solutions at the community, local and state levels. In the long-term the increased community capacity will have the potential to bolster community action to reduce exposure and sources of PM2.5 and DPM pollution.

Section 4 - Environmental Results - Outcomes, Outputs and Performance Measures

A. Expected Project Outputs and Outcomes

Objectives	Tasks	Outputs	Outcomes
Build capacity	Building awareness of the co-designing opportunity	Materials about the community framework opportunity available via: * DEQ's website, starting with English & Spanish * Culturally appropriate materials developed in coordination with NCA and community advocates * In-person presentations and/or printed materials for mailing, coordinated by our partner for outreach to remote and rural communities	* Increased awareness of community monitoring across website users, underserved, disadvantaged, rural and remote communities. * Air quality outreach via website and social media supplemented by partnerships to reach under-served, disadvantaged, rural and remote communities * Improved awareness especially among disadvantaged communities of air quality and community monitoring efforts
	Building data literacy and accessibility for community monitoring	* AQ 101 training materials * AQ presentations to community members and advocacy groups * Air Quality dashboard for PM2.5 and DPM * Information on how successful community monitoring projects inform community actions	

		<ul style="list-style-type: none"> * Survey assessing change in air quality awareness 	<ul style="list-style-type: none"> * Improved understanding of how community monitoring can be used to improve local air * Improved understanding of air quality data and health impacts * New and strengthened partnerships between underserved, disadvantaged and under-resourced communities and local universities * Improved outreach and communication processes with under-served, disadvantaged and rural and remote communities
	Building resource availability for community monitoring	Qualitative feedback and debrief from NCA and rural and remote community outreach efforts	
	Metrics and process improvement	<ul style="list-style-type: none"> * Web analytics to track traffic to capacity building pages * Qualitative feedback on outreach to under-served, disadvantaged and rural and remote communities * Report on outreach efforts with specific process improvement goals at the end of the first year 	
Co-design an equitable and sustainable monitoring framework	Planning	<ul style="list-style-type: none"> * Guidelines on developing an inclusive process for developing the community monitoring framework * Process/workshop structure that centers community requirements and needs around air quality monitoring 	Active participation in workshops by a wide spectrum of urban & rural communities across Oregon
	Co-designing the framework	Documented process for community monitoring with guidelines and metrics designed collectively by communities, universities, and local and state agencies	A framework for community monitoring and engagement that can serve as the foundation for an ongoing community-scale environmental stewardship effort
	Releasing and publicizing the framework	Framework document in English and Spanish on DEQ's website, outreach materials specifically targeting underserved, under-resourced, disadvantaged, rural and remote communities	Marks the culmination of a collaborative effort between communities, universities and agencies; lays the foundation of trusted relationships
Establish an instrument library	Set up instrumentation	40 Purple Airs, 10 micro-aeths, 10 weather stations targeted for community monitoring procured	<ul style="list-style-type: none"> * An accessible instrument library that communities can use to monitor PM2.5 and DPM locally * Data management and visualization infrastructure to enable communities to readily use air quality data in their decision-making * Improved community capacity for monitoring and air quality improvement for all OR communities, especially under-
	Develop calibration, maintenance, deployment, and QA/QC protocols	Documented protocols for calibration, maintenance, deployment, and QA/QC	
	Develop data management and visualization infrastructure	<ul style="list-style-type: none"> * Database for tracking community monitoring data established * Extended R package to support sensor-specific calibration * QA/QC checks for incoming monitoring data automated 	

		* Portal (alpha version) for community monitoring data set up	served, disadvantaged, rural & remote communities
	Instrument and data usage guides	Guides for instrument data use available	
Community Monitoring Projects	Call for and prioritize community monitoring projects	Four communities identified for monitoring during grant period	<ul style="list-style-type: none"> * Communities empowered to steward their local air quality * Ability for communities to supplement state-level policy and regulatory framework with local mitigation, adaptation and local regulatory action
	Implement framework guidelines	For each community (sequentially): <ul style="list-style-type: none"> * Identified AQ issue * Monitoring plan to address issue * Monitoring data * Action based on data * Lessons learned from community engagement 	
Evaluation	Meet with each community to assess their satisfaction with monitoring project	List of lessons learned Collected qualitative feedback from community	Framework improved and adapted to reflect lessons learned

B. Performance Measures and Plan

Objectives	Tasks	Metrics/Reports
Build capacity	Building awareness of the co-designing opportunity	Quarterly for the first year: <ul style="list-style-type: none"> * website traffic numbers * qualitative feedback from NCA * qualitative feedback from contractor reaching out rural and remote communities The report for the last quarter of the year will also include an interim report from the evaluator
	Building data literacy and accessibility for community monitoring	
	Building resource availability for community monitoring	
	Metrics and process improvement	
Co-design an equitable and sustainable monitoring framework	Planning	The quarterly report for the quarter following the one in which the workshop planning occurred will include: <ul style="list-style-type: none"> * summary of listening sessions * proposed workshop structure * proposed workshop themes and objectives * how the feedback was incorporated into the workshop structure
	Co-designing the framework	In the quarters in which the workshop occurs: <ul style="list-style-type: none"> * summary of workshop discussion * summary of workshop session outcomes
	Releasing and publicizing the framework	In the quarter following the quarter the framework document is completed, the quarterly report will include: <ul style="list-style-type: none"> * executive summary of framework * framework document Survey responses of workshop participants (?) This report will also include the evaluator's interim report.
	Setting up instrumentation	

Establish a library of low-cost sensors	Build instrumentation calibration, maintenance, deployment, and QA/QC procedures	<p>The quarterly report in the first year will include:</p> <ul style="list-style-type: none"> * updates on instrumentation acquisition * updates on protocol development for calibration, maintenance, and QA/QC procedures * updates on data management infrastructure development * updates on data visualization strategy * QAPP
	Build data management and visualization infrastructure	
	create instrument and data usage guides	
Community Monitoring Projects	Call for community monitoring	<p>The quarterly report will include:</p> <ul style="list-style-type: none"> * number of community monitoring proposals received * which communities were prioritized for monitoring
	Implement framework guideline to: (i) prioritize order of communities to monitor in (ii) convene community monitoring advisory group (iii) monitor air quality (iv) make data available (v) provide air quality expertise to inform potential actions	<p>DEQ will report on each community project completed within the grant within 60 days of the completion of monitoring. The report will include:</p> <ul style="list-style-type: none"> * community's air quality issue * monitoring strategy to address the issue * summary of monitoring data * status of the collaborative action to address the air quality issue * any other metrics and outcomes required by the community monitoring framework <p>These reports will be in addition to the quarterly reports.</p>
Evaluation		<p>Dr. Suldovsky will use an iterative process to assess the equity, sustainability, and effectiveness of community monitoring. Interim reports will be provided in the last quarter of Year 1 and year 2 of the grant. The final report will be provided to EPA within 60 days of the end of the grant.</p>

C. Timeline and Milestones

Key Activities/Outputs	Year 1: Nov 23 - Oct 24												Year 2: Nov 24 - Oct 25												Year 3: Nov 25 - Oct 26											
	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O
Build capacity																																				
Co-design: plan																																				
Co-design: framework																																				
Co-design: release											*																									
Instrument Library: setup																																				
Instrument Library: protocols																																				
Instrument Library: data																																				
Instrument Library: guides																																				
Framework - call for projects																																				
Framework - 1st community																																				
Framework - 2nd community																																				
Framework - 3rd community																																				
Framework - 4th community																																				
Evaluation																																				
Evolution of Program																																				

Section 5 – Quality Assurance Statement

Please see optional attachments.

Section 6 – Programmatic Capability and Past Performance

A. and B. Past Performance and Reporting Requirements

Assistance Agreement number: TA- 01J88601

Project Title: Klamath Falls Targeted Airshed Program

The agreement enables Klamath County Public Health and South Central Oregon Economic Development District to reduce PM_{2.5} from wood smoke through a range of programs, including woodstove change-out and home weatherization that improve heating efficiency and reduce heating costs for residents. The grant strengthens existing Oregon DEQ, Klamath County Public Health and the South Central Oregon Economic Development District's efforts to deliver a comprehensive program that reduces emissions from residential woodstoves in the Klamath Falls area.

Grant performance and reporting: DEQ has submitted two reports in October 2021 and January 2022 and paid out \$219,978 of the grant funds out of approximately \$1.6 million to perform wood stove change outs so far and anticipates expending all funds and meeting all objectives of the agreement in 2023.

Assistance agreement number: DS-01J63701

Project title: FY 2019 School Bus Replacement Project

This agreement supported Oregon DEQ's efforts to reduce diesel emissions and exposure throughout the state of Oregon. ODEQ used the funds to replace, repower or retrofit diesel-powered school buses to reduce emissions of DPM, NO_x, CO, and hydrocarbons.

Grant performance and reporting: This grant is state allocation under the EPA Diesel Emissions Reduction Act. Oregon used matching funds from the Volkswagen Settlement to bring additional Federal dollars into Oregon aimed at reducing diesel emissions. ODEQ has provided quarterly updates on time throughout the project term and the Project Manager regularly checks-in with the EPA Project Officer. EPA managers communicated to our agency Director acknowledging our good work under this agreement. The agreement was amended to extend the deadline and completed successfully on 10.31.21.

Assistance agreement numbers: XA-01J41501

Project title: Improving Diesel Particulate Matter Exposure Assessment for Vulnerable Populations

This project aimed to characterize diesel emissions from marine, locomotive, construction, and freight, with particular attention to understanding the exposure effects for vulnerable populations including low-income residents and communities of color. An additional goal was to inform communities about the sources of diesel PM impacting their communities and to enable local action to address these concerns.

Grant performance and reporting: Despite challenges in capturing the plume from locomotives and marine diesel sources, followed by the challenges posed by two years of pandemic shelter in place policies, the project is on track to successfully meet its goals and wrapping up by 31st March 2022. Oregon DEQ has provided timely semi-annual updates and has maintained check-ins with the EPA Project Officer over the course of the project. DEQ will be leveraging its partnership with NCA and PSU and has incorporated lessons learned from the community outreach effort of the DPM grant into the current grant proposal.

C. Staff Expertise (See Attachment 3 for detailed bios)

Key DEQ staff: *Svetlana Lazarev, PMP*, Air Quality Modeler and Project Manager with 23 years of emissions inventory, modeling, and project management experience. *Meenakshi Rao, Ph.D.*, is a Senior Air Quality Planner with experience in air pollution data and equity analysis. *Tim Wollerman* is a Public Affairs Specialist with more than 20 years of community education and outreach experience. Other DEQ staff include, *Ben Ayres, Ph.D.* an Air Monitoring Specialist at DEQ's Laboratory leading the air toxics monitoring program, *Matt Shrensel*, a

metrologist specializing in gas analyzers, communications, standards, and calibrations. *Aaron Fellows*, a Data Assessment Specialist experienced in data management and QA/QC of monitoring data. *Owen Rudloff*, an Air Quality Permit Writer experienced in data analysis and visualization. *Peter Brewer*, Air Quality Attainment Coordinator & Wildfire Smoke Response Coordinator in Eastern Region has over 30 years of experience in the field of air quality. *Jennifer Horton* an Air Quality Coordinator working with communities in Southern Oregon. *Michael Orman*, Air Quality Planning Manager has been with DEQ since 2016 and *Ali Mirzakhali*, Air Quality Division Administrator, who has been leading the Air Quality Division since 2018.

Key DEQ partners: *Jonathan Callahan*, PhD. is a recognized expert in data management, analysis and visualization of environmental modeling and monitoring data currently focused on creating software packages for QC, analysis, and visualization of air quality data. *Mary Peveto* is an Executive Director of Neighbors for Clean Air and an experienced environmental advocate. *Brianne Suldovsky, Ph.D.* is an Assistant Professor at Portland State University specializing in science and environmental communication.

Section 7 – Budget

A. Budget Detail

The total budget for this project is estimated to be \$1,333,659.

The requested budget of \$498,796 includes equipment to establish a library of sensors, sub-awards to DEQ's partners for framework design and implementation of monitoring in four communities. Several professional, technical, management and administrative staff in the DEQ Air Quality Division will support the project. Personnel budget, fringe benefits, overhead/indirect, supplies and other expenses not counted towards the estimated requested federal funds will be a non-federal voluntary cost share as detailed in budget form SF-424.

- Personnel: Based on an analysis of staff involved in this grant's work, DEQ used the following representative classification types to develop the personal services budget: Principal Manager E, Natural Resource Specialist 3, Natural Resource Specialist 4, Natural Resource Specialist 5, and Public Affairs Specialist 2. DEQ estimates this grant will be supported by 53.86 months of work (2.244 FTE). Months of work and biennial FTE are rounded for display purposes.
 - *DEQ personnel in-kind services: \$425,041*
- Fringe Benefits: Shown as a percentage of personal service salary amounts and comprised of a combination of several factors such as FICA/Medicare = 7.65%, Pension Costs = 16.39%, mass transit tax (non-federal only) = 0.60%, Medical/Dental, Workman's Comp., and Unemployment = \$1,471/month.
 - *Fringe Benefits in-kind contribution: \$183,946*
- Equipment: The costs of 40 PurpleAir monitors, 10 Black Carbon Analyzers and 10 weather stations as outlined in the budget table.
 - *Equipment: \$232,726*
- Supplies: Estimates derived from a wide range of different DEQ program activities and include office, laboratory and field supplies not included in indirect expenses.
 - *Supplies in-kind contribution: \$10,327*
- Other Costs – Subawards to Neighbors for Clean Air for building community capacity and implementation of community monitoring in 4 Oregon communities. Subaward to contractor for remote/rural community outreach. Subawards to Desert Research Institute for Data Management and Portland State University for project performance evaluation. Other miscellaneous expenses associated with the project are and accounted for in the SF-424 table will be in-kind contribution.
 - *Other Costs: \$266,070*
 - *Other Expenses in-kind contribution: \$89,489*
- Indirect Charges – indirect costs were calculated based on DEQ Federally Negotiated Rate of 20.7% of personnel and fringe and will be in-kind contribution not counted towards the total requested budget.
 - *Indirect in-kind contribution: \$126,060*

Budget Table

Line Item and Itemized Cost	EPA Funding
Equipment	
40 Purple Air PA-II Monitors @ \$279 each	\$11,160
10 AethLabs microaeth 300 @ \$13,995 each	\$139,950
10 Anemometer/weather stations @ \$500	\$5,000
Microaeth instruments maintenance + spare parts + repairs	\$10,000
Purple air equipment breakdown replacement @ 4 sensors, \$279 each	\$1,116
Anemometer breakdown replacement @ 2 monitors \$500 each	\$1,000
120 Cartridge replacements @ \$500 each	\$60,000
Setup (shipping, face to face), 10 @ \$450 each	\$4,500
TOTAL EQUIPMENT	\$232,726
Other	
Subaward to Desert Research Institute Data Management	\$26,724
Subaward to Project performance measures and evaluation, PSU	\$34,846
Subaward for rural and remote communities' outreach to distribute materials	\$10,000
Subaward to Neighbors for Clean Air, building community capacity, 4 communities @ 15,000 each	\$75,000
Implementation of Community monitoring in four communities @ 20,000 each	\$80,000
Seven workshops' stipends for 40 people for attending, one in person 4-hr meeting, six virtual meetings	\$14,000
Travel, Meals, Facilities Rental for the in-person workshop	\$4,500
Facilitation	\$5,000
Translation and interpretation services, website development in two languages	\$10,000
Partners travel to present at a conference	\$6,000
TOTAL OTHER	\$266,070
TOTAL FUNDING	\$498,796
TOTAL PROJECT COST	\$1,333,659

B. and C. Reasonableness of Costs and Expenditure of Awarded Funds

The budget narrative along with the supplemental budget form shows reasonableness of costs for the proposed project. DEQ follows all the requirements that are deemed necessary as a state government entity in the State of Oregon for applicable budgeting and procurement policies. DEQ has received numerous Federal grants over the years and has followed all applicable terms set by the Environmental Protection Agency.

Section 8 – Optional Attachments

1. Section 5 – Quality Assurance Statement
2. Partnership Letters and Letters of Support
3. Resumes of the Project Manager and Other Key Personnel

Manifest for Grant Application # GRANT13580162

Grant Application XML file (total 1):

1. GrantApplication.xml. (size 24467 bytes)

Forms Included in Zip File(total 6):

1. Form ProjectNarrativeAttachments_1_2-V1.2.pdf (size 16030 bytes)

2. Form SF424_3_0-V3.0.pdf (size 24125 bytes)

3. Form SF424A-V1.0.pdf (size 22901 bytes)

4. Form EPA4700_4_3_0-V3.0.pdf (size 22815 bytes)

5. Form OtherNarrativeAttachments_1_2-V1.2.pdf (size 16000 bytes)

6. Form EPA_KeyContacts_2_0-V2.0.pdf (size 37293 bytes)

Attachments Included in Zip File (total 5):

1. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1236-Optional Attachment3_ Resumes.pdf application/pdf (size 154467 bytes)

2. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1237-2123 AQ ARP Grant Budget Detail and Notes.pdf application/pdf (size 237653 bytes)

3. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1235-Attachment2_ODEQ Partner Letters and Letters of Support-EPA Air Monitoring Grant.pdf application/pdf (size 1533336 bytes)

4. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1234-Attachment1_quality_assurance.pdf application/pdf (size 126954 bytes)

5. ProjectNarrativeAttachments_1_2 ProjectNarrativeAttachments_1_2-Attachments-1238-EPAGrant-ORDEQ-Lending Library.pdf application/pdf (size 443275 bytes)

Section 5: Quality Assurance Statement

DEQ will train community members and provide documentation that will help community members choose ideal sites for samplers, advise them in proper operating procedures for each type of sampler, assist in discerning data quality and give them a standard timeline in which to maintain the samplers. The documentation will also provide typical values of data for that community's area (based on PM monitoring in that airshed), links to useful websites for data comparison (ex. AirNow), helpful videos and online documentation to assist in data development and illustrated procedures for general maintenance. It will also provide troubleshooting steps such as switching samplers with another located nearby for a validity check or locating sensors up/downwind of possible pollutant "hotspots". Siting of the samplers will need to be done with the whole community in mind and represent everyone in that community.

DEQ and community members will maintain all instruments and equipment in sound operating condition and capable of operating at acceptable performance levels.

DEQ and community members will maintain and inspect all analytical and sample collection equipment in accordance with the procedure's test methods.

All samplers used in the project will meet the instrument requirements described in the Compendium of EPA Methods or ASTM methods. Therefore, they are assumed to be of sufficient quality for the data collection operation.

DEQ and community members will perform operational checks to verify continuing performance within specifications. If any of these checks are out of specification, DEQ will attempt to correct them or replace them with verified samplers.

Samplers will regularly need maintenance attention in the network. The following field and laboratory procedures will be used:

Procedure	Interval	Responsible
Replace Sampler	Annually	Lab Technician
Clean Sampler (compressed air)	3 Months	Site Operator
Verify Sampler response	Annually	Lab Technician
Data Quality Verification	Monthly	Lab Technician/ Site Operator
Update correlation factors	Annually	Lab Technician

As audits cannot be performed on Purple Air samplers, comparison between the two sensors will suffice for sample audits. If at any point the two sensors in a single Purple Air sampler vary by more than 15%, the sampler will need to be replaced and that data analyzed to determine the length of time for which the data has not been valid. Community members checking the data will also be trained in data analysis such as recognizing signs of a sensor malfunction/failure and comparison to sensors that are located nearby.

DEQ's Purple Air calibration procedure will be followed.

Samplers returned to DEQ will be compared for a minimum of three days to standardized PM samplers and tested for clean air validity.

Attachment 3. Staff Expertise

Oregon Department of Environmental Quality

Svetlana Lazarev, PMP, Air Quality Modeler and Project Manager

Svetlana has 23 years of air quality experience as Emissions Inventory Specialist, a Modeler, and a Project Manager at Oregon DEQ. She holds a Bachelor of Science degree in Mechanical Engineering from Belorussian National Technical University, a Master of Science in Environmental Engineering from Technion, Israel Institute of Technology, a PMP certification from Project Management Institute and a Diversion, Equity, and Inclusion in the Workplace Certification from the University of South Florida Muma College of Business. In her Professional Project Manager capacity, Svetlana has been leading technical and rulemaking projects at Oregon DEQ since 2018.

Meenakshi Rao, PhD, Senior Air Quality Planner

Meenakshi believes that good policy is grounded in both transparent data and data analysis as well as community voice and lived experience. Her multi-disciplinary background helps her bring this dual perspective to her role as air quality planner. Her expertise in geo-spatial analysis, machine learning and air quality modeling is balanced by her dedication to equity and environmental justice. She is an advocate for open environmental data and a founding member of the Environmental Justice Working Group at ODEQ. As adjunct faculty at Portland State University, she mentors students on air quality and equity issues and continues to hone her analytical skills through collaborations and co-mentoring opportunities at both ODEQ and Portland State University.

Tim Wollerman, Air Quality Public Affairs Specialist

Tim has 20 years of communications, outreach and program management experience in nonprofit and government agencies at the local, state and national level. He holds a Bachelor of Arts degree in Political Science and a Bachelor of Arts in Behavioral Science from the University of Wisconsin-Madison. He has a Master in Public Administration degree from Michigan State University. He joined Oregon DEQ in 2018 and leads communications and outreach efforts for the DEQ Air Quality Division.

Owen Rudloff, Air Permit Writer and Inspector

Owen is enthusiastic and driven environmental professional with eight years of air quality permitting and environmental consulting experience. He is experienced in atmospheric science, air quality, environmental science, modeling, air quality permitting and regulations, and facilitating engagement with a broad range of stakeholders. Owen holds a Bachelor of Arts degree in Geology from Macalester College and a Master of Science degree in Geology from Indiana University. He joined DEQ in 2019 and uses his expertise in air quality, environmental justice, environmental science, and data analysis and visualization in evaluating air quality at state and local levels.

Benjamin Ayres, PhD, Air Toxics Specialist

Ben has 10 years of experience in aerosol chemistry, gas chemistry and air monitoring instrumentation. Ben received his Bachelor of Science from James Madison University, his Master of Science from Georgia Institute of Technology and his PhD from Portland State University. Ben began his air monitoring career at Colorado State University researching inorganic aerosols, specifically ammonium nitrate, at several sites in the IMPROVE network. After his graduate degree, he spent two years with Reed College researching secondary aerosol formation by oxidation of biogenic volatile organic compounds in boreal

forests. He joined ODEQ in 2017 and is currently the lead worker for the air toxics program, which consists of 8 sites running trend analysis and up to 4 annual, rotating sites.

Matt Shrensel, Air Quality Monitoring Metrologist

Matt has over 11 years of diverse environmental experience, with the most recent 6 years in ambient air quality monitoring at Oregon DEQ. Matt is originally a geologist by training with a Geosciences and Environmental Science degree from Skidmore College and extensive experience performing site remediation in NJ. As the metrologist with DEQ's Air Quality Monitoring team, Matt is responsible for the criteria gas monitoring program, calibrations and standards. Matt is also DEQ's lead on PAMS implementation and performs extensive work on remote telemetry, data acquisition, and low-cost sensor implementation. At Oregon DEQ, Matt enjoys living and breathing air quality science every day, and enjoys solving complicated problems.

Aaron Fellows, Air Quality Assessment Specialist

Aaron is a broadly trained physical scientist that provides data management and analysis for air quality work at ODEQ. Aaron has a range of analytical and computer skills. He has used these skills to support a number of air quality related projects, including building dashboards, exploring the use of low-cost sensors for PM2.5 monitoring, automating data workflows for reporting, and identifying airsheds in Oregon.

Peter Brewer, PE, Air Quality Attainment & Wildfire Smoke Response Coordinator

Peter has 33 years of environmental experience primarily in the field of air quality. He worked for Oregon DEQ in various AQ staff positions in their HQ and regional offices, as an AQ Engineer and later the AQ Regional Program Manager (1998-2005). He has worked in the private sector as a corporate environmental manager for a global manufacturing firm (2006-5/2017) and previously as an environmental consultant. He returned to work with DEQ in 2017 as the Regional Air Quality Attainment Coordinator where he works with different communities on PM2.5 challenges and manages their grant contracts. He also works on forest prescribed fire smoke issues, statewide wildfire smoke response issues, and agricultural burning.

Jennifer Horton, Air Quality Coordinator

Jennifer is based in southern Oregon and has been with DEQ for 2 years. She has worked in the open burning program, the asbestos program, air quality permitting, and is now an Air Quality Coordinator working with communities on smoke preparedness and response and alternatives to burning. Jennifer has a Bachelor of Science in Environmental and Resource Science and is completing a Master of Science in Environmental Policy and Management.

Michael Orman, PE, Air Quality Planning Manager

Michael has spent his entire professional career focused on protecting and enhancing the quality of our air, the health of the public, and our environment. Within Arizona DEQ, Michael worked for roughly 3 years as an air quality permit writer, enforcement supervisor and enforcement and compliance manager. Michael transitioned to Oregon DEQ in 2016, where he worked as a regional air quality manager and is now serving as Oregon's air quality planning section manager. Michael has a breadth of knowledge on all aspects of air quality and has a broad lived experience as an air quality regulator. Michael is a licensed Professional Environmental Engineer in Arizona and Oregon.

Ali Mirzakhali, Air Quality Division Administrator

Ali has been with Oregon Department of Environmental Quality since 2018. In this position, Ali is responsible for all aspects of the Air Quality Program in Oregon, including Climate Change, Criteria Pollutants, Air Toxics and Visibility. Prior to coming to Oregon, he served as the Director of Division of Air Quality with the Delaware's Department of Natural Resources and Environmental Control. He was responsible for implementing all aspects of the Clean Air Act requirement as well as overseeing the implementation of Regional Greenhouse Gas Initiative in Delaware. Prior to becoming a Director, he held positions as Administrator and Program Manager all with the Air Quality Division. He has over 30 years of experience in all aspects of air quality management, including program and regulatory development, planning, compliance and enforcement and permitting. He is a Professional Engineer registered in Delaware, holds a BS in engineering from the University of Delaware and a MS in Environmental Planning and Management from Whiting School of Engineering of Johns Hopkins University.

Partners

Mary Peveto, Executive Director at Neighbors for Clean Air. Mary is an experienced Executive Director with a demonstrated history of working in the non-profit organization management industry. She is skilled in Nonprofit Organizations, Policy Analysis, Event Planning, Communication, and Volunteer Management. Mary is a strong professional with a Bachelor of Science focused in History from Macalester College.

Jonathan Callahan, Ph.D., Associate Research Professor at Desert Research Institute.

Dr. Callahan is a recognized expert in data management, analysis and visualization of environmental modeling and monitoring data. In invited presentations, he has represented US science agencies (NOAA, EPA, USFS) on the national and international stage. Dr. Callahan's core focus is bringing modern software practices and best available tools to research settings where he has developed standards and architected solutions that have become agency policy and are used operationally in agency-critical systems. As CEO and Chief Scientist at Mazama Science, Dr. Callahan managed contracts from multiple government agencies and nonprofit institutes while mentoring young scientists to create robust, reusable software. Mazama Science solutions have resulted in scientific papers, operational data processing pipelines and critically important, high-traffic websites. Software designed by Dr. Callahan is found in key components of US Forest Service air quality data systems used operationally in response to wildfires. Dr. Callahan holds a PhD in Physical Chemistry from the University of Washington.

Brianne Suldovsky, PhD, Assistant Professor at Portland State University. Dr. Suldovsky specializes in science and environmental communication. Her research examines how scientists engage the public and public understanding of controversial science, including climate change and genetic engineering (i.e. GMOs). She collaborates with a diversity of partners including environmental scientists, economists, geographers, climatologists, philosophers, and community groups. Dr. Suldovsky holds a PhD in Communications from University of Maine.



Attn: Ali Mirzakhali, Air Quality Administrator
Oregon Department of Environmental Quality (DEQ), Air Quality Division
700 NE Multnomah St. Suite 600
Portland, OR 97232

March 23, 2022

Dear Mr. Mirzakhali,

I am excited to submit this letter of commitment for your EPA project: “Building a collaborative community framework for cleaner air”. Through my work supporting the US Forest Service AirFire group’s air quality monitoring websites, I am keenly aware of the need for more air quality monitoring locations throughout rural Oregon. This proposal directly addresses that need with a novel “lending library” approach to directly engage local communities in measuring air quality. The proposed strategy of using “shared tools” to address “shared problems” complements my own approach to air quality software packages I have released in recent years.

Until August, 2021, I was CEO and Chief Scientists at Mazama Science – a small data analytics consultancy with a focus on air quality. Mazama Science released multiple open source R packages (PWFSLSmoke, AirSensor and others) for environmental monitoring data with an emphasis on analysis of data from both regulatory air quality monitors and low-cost sensors. At Mazama Science, our mission was to create “shared tools for a community of practice” – to take care of the details of data ingest, QC and harmonization so that air quality specialists could spend less time accessing data and more time analyzing it. Now at the Desert Research Institute, my work continues to be focused on creating open source R packages focused on air quality and other environmental data. I am also responsible for air quality monitoring data ingest, QC and data archiving for the USFS AirFire group. Those data streams are used in websites hosted by AirFire including the EPA AirNow Fire & Smoke map. My experience working with data from both regulatory monitors and low-cost sensors will prove very useful when it comes to setting up robust, easy-to-use archives for the air quality data generated by the Oregon DEQ project.

By participating in this proposal, I will be able to further develop and exercise the open source R packages that have already been released. If funded, the data generated by this proposal will go beyond helping specific communities understand their air quality issues. It will also provide an additional test-bed for the open source software and data management strategies I continue to work on at the Desert Research Institute. Further refinement of these “shared tools” will aid other community oriented air quality projects in the future.

I look forward to working with you on this exciting project,

Jonathan Callahan, Ph.D.
Associate Research Professor, Desert Research Institute



Oregon Department of Environmental Quality
700 NE Multnomah Street, Suite #600
Portland, OR 97232
re: Partnership on EPA Grant Proposal

March 22, 2022

Dear Administrator Mirzakhali,

I am writing on behalf of Neighbors for Clean Air to express our support and willingness to partner with the Oregon Department of Environmental Quality on their proposals for EPA's Enhanced Air Quality Monitoring for Communities grant opportunities.

Neighbors for Clean Air is a nonprofit grassroots organization committed to improving air quality in all Oregon communities. Neighbors for Clean Air organizes multi-pronged campaigns with communities to counter some of the most severe threats to Oregon's air quality.

Clean air is a racial justice issue. Neighbors for Clean Air will partner with DEQ to coordinate outreach to historically underserved and under-resourced communities. DEQ will contract with Neighbors for Clean Air to coordinate engagement with rural, migrant workers, minority and low-income communities to ensure their voice is represented in the design and implementation of this program. We will also coordinate sub-contracts for key stakeholder groups to conduct outreach to their own constituents.

The greatest known environmental health risk in Oregon is coming from PM2.5, formaldehyde and diesel PM. Communities need to understand the sources contributing to health risk in their communities in order to develop action plans to address them. Local air monitoring data can help communities make decisions on how to reduce exposure and inform local and regulatory strategies.

We commend DEQ for their plan to partner with existing Oregon stakeholders to inform the design of the programs, establish monitoring protocols, prioritize communities for implementation based on environmental justice factors and provide roadmaps for local partners to translate data into action plans. We are excited about the opportunity to have additional resources in Oregon to manage air quality at the community level. My organization supports these efforts and welcomes the opportunity to partner with DEQ to create and implement these programs.

Sincerely,

A handwritten signature in dark ink that reads 'Mary S. Peveto'.

Mary Peveto
Executive Director
Neighbors for Clean Air

Oregon Department of Environmental Quality
700 NE Multnomah Street, Suite #600
Portland, OR 97232

re: Partnership on EPA Grant Proposal

March 22, 2022

Dear Administrator Mirzakhali,

I am writing to express my support and willingness to partner with the Oregon Department of Environmental Quality on the proposal for EPA's Enhanced Air Quality Monitoring for Communities grant opportunities.

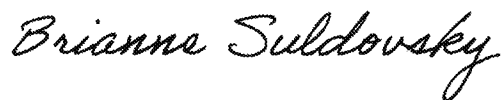
I am an Assistant Professor at Portland State University with a Ph.D. in communication. In my research I specialize in public understanding of science, risk communication, and public engagement evaluation. I welcome the opportunity to partner with DEQ to develop an evaluation strategy for the proposed air monitor lending library program.

I commend DEQ's strategy to create performance measures with a Community Monitoring Advisory Group consisting of members from rural, disadvantaged and diverse communities. This kind of work is invaluable. As part of this effort, I will work with community hosts of the air monitor lending library to evaluate the program based on the defined performance measures.

The evaluation strategy will include both quantitative and qualitative measures of the monitoring program. In addition to air quality monitoring data, an evaluation on community engagement, equity in implementation, and education will be critical to shaping and evolving this program.

I am excited about the opportunity to partner with Oregon communities on an evaluation strategy and for Oregon to have additional resources to manage air quality at the community level.

Sincerely,

A handwritten signature in black ink that reads "Brianne Suldovsky". The script is fluid and cursive, with the first name "Brianne" and last name "Suldovsky" clearly legible.

Brianne Suldovsky
Assistant Professor of Science, Environment, and Risk Communication
Department of Communication
Portland State University

To: The U.S. EPA 3/23/2022

RE: ARP Grant Proposal for the Oregon Department of Environmental Quality

From: Lisa Arkin, Executive Director, Beyond Toxics

Date: 3/23/2022

To Whom It May Concern:

I am writing express my support for an air quality proposal submitted by the Oregon Department of Environmental Quality (ODEQ) for funding under the American Rescue Plan.

The proposed project will reduce localized air pollution, connect with impacted communities, and build the agency's capacity to practice and promote community engagement in air quality impacted communities.

I am the Executive Director of Beyond Toxics, an environmental justice nonprofit working to advance the power of Lane County's most vulnerable and marginalized communities who are exposed to a disproportionate share of environmental health burdens. Established in 2001, Beyond Toxics' staff are recognized leaders working to uphold bold and intersectional policies that advance racial, climate, and environmental justice. Beyond Toxics has also served over five years as an environmental advocate and community representative on the ODEQ Cleaner Air Oregon Rules Advisory Committee, a program to modernize and strengthen Oregon's air quality regulations.

I've been impressed with the DEQ's work in the Cleaner Air Oregon rulemaking process and remain very hopeful that the ODEQ will the request grant funds to promote environmental justice, reduce air toxics and benefit the health of all Oregonians.

Beyond Toxics is committed to supporting the work associated with the ODEQ's grant application. Please feel free to contact me directly with any additional questions or clarifications.

Sincerely, Lisa Arkin





THE BUREAU OF
**PLANNING &
SUSTAINABILITY**

March 16, 2022

Oregon Department of Environmental Quality
700 NE Multnomah Street, Suite #600
Portland, OR 97232

Dear Administrator Mirzakhali,

I am writing on behalf of my organization to express support for the Oregon Department of Environmental Quality's proposals for the Environmental Protection Agency's Enhanced Air Quality Monitoring for Communities grant opportunities.

The greatest known health risk in Oregon is coming from PM2.5, formaldehyde and diesel PM. Communities also have concerns for acute health risk from local sources and do not have the ability to monitor for near real-time concentrations of toxic air contaminants. Communities need to understand the sources contributing to health risk in their communities to develop action plans to address them.

The proposed lending library of low-cost monitors for community-scale monitoring and the moveable monitoring platform for volatile organic compounds provide the necessary tools for Oregon communities to manage their own air quality. Local air monitoring data can help communities make decisions on how to reduce exposure and inform local and regulatory strategies.

Communities also need to be involved in designing data collection, data analysis and data management methods. Partnership with communities on these stages will help support improved understanding, trust, and use of the data to achieve actionable goals.

We commend DEQ for their plan to partner with Oregon stakeholders to inform the design of the programs, establish monitoring protocols, prioritize communities for implementation based on



City of Portland, Oregon | Bureau of Planning and Sustainability | www.portland.gov/bps
1810 SW 5th Avenue, Suite 710, Portland Oregon, 97201 | phone: 503-823-7700 | tty: 503-823-6868

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Traducción e Interpretación | Biên Dịch và Thông Dịch | अनुवादन तथा व्याख्या | 口笔译服务 | Устный и письменный перевод | Turjumaad iyo Fasiraad | Письмовий і усний переклад | Traducere și interpretariat | Chiaku me Awewen Kapas | 翻訳または通訳 | ການແປພາສາ ຫຼື ການອະທິບາຍ | الترجمة التحريرية أو الشفهية | Portland.gov/bps/accommodation

environmental justice factors and provide roadmaps for local partners to translate data into action plans. DEQ's proposed Community Monitor Advisory Group provides Oregon communities a seat at the table to build, evaluate and evolve this program. We encourage partnership with Oregon stakeholders that have experience and relationships in environmental justice communities. We also encourage partnership not only as advisory group participants but also as partners to help design, facilitate, and implement the advisory group.

We are excited about the opportunity to have a lending library of monitors and movable monitoring program to manage air quality at the community level. My organization supports these efforts and welcomes the opportunity to partner with DEQ to create and implement these programs.

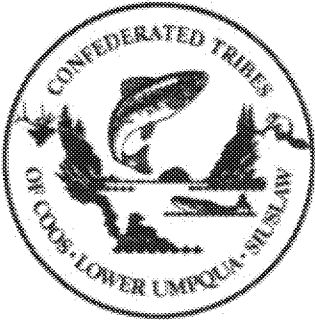
Sincerely,



Andrea Durbin
Director, Bureau of Planning and Sustainability
City of Portland



City of Portland, Oregon | Bureau of Planning and Sustainability | www.portland.gov/bps
1810 SW 5th Avenue, Suite 710, Portland Oregon, 97201 | phone: 503-823-7700 | tty: 503-823-6868



**CONFEDERATED TRIBES OF
COOS, LOWER UMPQUA AND SIUSLAW INDIANS
TRIBAL GOVERNMENT**

1245 Fulton Avenue - Coos Bay, OR 97420

Telephone: (541)888-9577 Toll Free 1-888-280-0726 Fax: (541)888-2853

March 2, 2022

Oregon Department of Environmental Quality
700 NE Multnomah Street, Suite #600
Portland, OR 97232

Dear Administrator Mirzakhali,

I am writing on behalf of the Confederated Tribes of Coos, Lower Umpqua and Siuslaw Indians to express support for the Oregon Department of Environmental Quality's proposals for the Environmental Protection Agency's Enhanced Air Quality Monitoring for Communities grant opportunities.

The greatest known health risk in Oregon is coming from PM2.5, formaldehyde and diesel PM. Communities also have concerns for acute health risk from local sources and do not have the ability to monitor for near real-time concentrations of toxic air contaminants. Communities need to understand the sources contributing to health risk in their communities in order to develop action plans to address them.

The proposed lending library of low-cost monitors for community-scale monitoring and the moveable monitoring platform for volatile organic compounds provide the necessary tools for Oregon communities to manage their own air quality. Local air monitoring data can help communities make decisions on how to reduce exposure and inform local and regulatory strategies.

We commend DEQ for their plan to partner with Oregon stakeholders to inform the design of the programs, establish monitoring protocols, prioritize communities for implementation based on environmental justice factors and provide roadmaps for local partners to translate data into action plans. DEQ's proposed Community Monitor Advisory Group provides Oregon communities a seat at the table to build, evaluate and evolve this program.

We are excited about the opportunity to have a lending library of monitors and movable monitoring program to manage air quality at the community level. My organization supports these efforts and welcomes the opportunity to partner with DEQ to create and implement these programs.

Respectfully,

Lee Ann Wander
Chief Executive Officer
Confederated Tribes of Coos, Lower and Siuslaw Indians



March 11, 2022

Ali Mirzakhilili
Oregon Department of Environmental Quality
700 NE Multnomah Street, Suite #600
Portland, OR 97232

Dear Administrator Mirzakhilili,

I am writing on behalf of the Lane Regional Air Protection Agency to express support for the Oregon Department of Environmental Quality's proposals for the Environmental Protection Agency's Enhanced Air Quality Monitoring for Communities grant opportunities.

The greatest known health risk in Oregon is coming from PM_{2.5}, formaldehyde and diesel PM. Communities also have concerns for acute health risk from local sources and do not have the ability to monitor for near real-time concentrations of toxic air contaminants. Communities need to understand the sources contributing to health risk in their communities in order to develop action plans to address them.

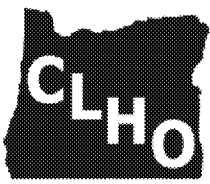
The proposed lending library of low-cost monitors for community-scale monitoring and the moveable monitoring platform for volatile organic compounds provide the necessary tools for Oregon communities to manage their own air quality. Local air monitoring data can help communities make decisions on how to reduce exposure and inform local and regulatory strategies.

We commend DEQ for their plan to partner with Oregon stakeholders to inform the design of the programs, establish monitoring protocols, prioritize communities for implementation based on environmental justice factors and provide roadmaps for local partners to translate data into action plans. DEQ's proposed Community Monitor Advisory Group provides Oregon communities a seat at the table to build, evaluate and evolve this program.

We are excited about the opportunity to have a lending library of monitors and movable monitoring program to manage air quality at the community level. My organization supports these efforts and welcomes the opportunity to partner with DEQ to create and implement these programs.

Sincerely,

Steven A. Dietrich
Executive Director



The Oregon Conference of Local Health Officials

Conference of Local Health Officials

Thursday, February 17th, 2022

Oregon Department of Environmental Quality
Attn: Ali Mirzakhilili
700 NE Multnomah Street, Suite #600
Portland, OR 97232

Dear Administrator Mirzakhilili,

The Oregon Conference of Local Health Officials, representing all of the 32 local public health authorities in Oregon, is writing to express support for the Oregon Department of Environmental Quality's proposals for the Environmental Protection Agency's Enhanced Air Quality Monitoring for Communities grant opportunities.

The greatest known health risk from toxic air contaminants is related to particulate matter (PM) 2.5 microns or smaller, formaldehyde and diesel PM. Communities have concerns about acute health risks from local sources and do not have the ability to monitor for near real-time concentrations of toxic air contaminants. In order to address contamination, communities need to understand the sources contributing to health risk.

The proposed lending library of low-cost monitors for community-scale monitoring and the moveable monitoring platform for volatile organic compounds provide the necessary tools for Oregon communities to manage their own air quality. Local air monitoring data will help communities make decisions on how to reduce exposure and inform local and regulatory strategies.

We commend DEQ for their plan to partner with Oregon stakeholders to inform the design of the programs, establish monitoring protocols, prioritize communities for implementation based on environmental justice factors and provide roadmaps for local partners to translate data into action plans. DEQ's proposed Community Monitor Advisory Group provides Oregon communities a seat at the table to build, evaluate and evolve this program.

We are excited about the opportunity to have a lending library of monitors and movable monitoring program to manage air quality at the community level. The Oregon Conference of Local Health Officials supports these efforts and welcomes the opportunity to partner with DEQ to create and implement these programs.

Sincerely,

Jocelyn Warren, PhD, MPH
Chair





OFFICE OF THE DIRECTOR
Office of the State Public Health Director
Kate Brown, Governor



Oregon Department of Environmental Quality
700 NE Multnomah Street, Suite #600
Portland, OR 97232

800 NE Oregon St., Ste. 930
Portland, OR 97232-2195
Phone: 971-673-1222
Fax: 971-673-1299

Dear Administrator Mirzakhali,

I am writing on behalf of the Oregon Health Authority Public Health Division to support the Oregon Department of Environmental Quality's (DEQ) proposals for the Environmental Protection Agency's Enhanced Air Quality Monitoring for Communities grant opportunities.

The ambient air pollutants of largest health concern in Oregon are volatile organic compounds (VOCs) and fine particles, including those from diesel combustion. Communities have concerns of acute health risks from local sources of air pollutants but do not have the ability to monitor for near real-time concentrations. Understanding the sources contributing to health risk in their communities will inform community action plans to address them.

DEQ's proposed lending library of low-cost monitors for community-scale monitoring and the movable monitoring platform for VOCs would provide the necessary tools for Oregon communities to monitor their own air quality. Local air monitoring data can help communities make decisions on how to reduce exposures and inform local and regulatory strategies.

OHA supports DEQ for their plan to partner with Oregon stakeholders to inform the design of the programs, establish monitoring protocols, prioritize communities for implementation based on environmental justice factors, and provide roadmaps for local partners to translate data into action plans. DEQ's proposed Community Monitor Advisory Group provides Oregon communities a seat at the table to build, evaluate and evolve this program.

We are excited about DEQ's plans to help inform air quality at the community level and welcome the opportunity to partner with DEQ to create and implement these programs. These efforts will also allow OHA to advance its own initiative that aims to eliminate health disparities by 2030. This includes our efforts to support those affected by wildfires directly and through community-based organizations and supplying those most vulnerable and sensitive to air pollution health effects with air purifiers and education.

Sincerely,

Dean E. Sidelinger, MD, MEd
State Epidemiologist and State Health Officer



February 23, 2022

Ali Mirzakhali
Air Quality Administrator
Oregon Department of Environmental Quality
700 NE Multnomah Street, Suite 600
Portland, OR 97232

Reference: US EPA Request for Applications EPA-OAR-OAQPS-22-01

Dear Mr. Mirzakhali,

The Portland Downtown Neighborhood Association strongly supports Oregon Department of Environmental Quality proposals for the recent US Environmental Protection Agency Enhanced Air Quality Monitoring for Communities grant opportunities. A DEQ Lending Library of air quality monitors and a Moveable Monitoring Platform of Federal Reference Method (FRM) or Federal Equivalent Method (FEM) instruments is needed to accurately measure the quality of air in Downtown Portland relative to established National Ambient Air Quality Standards. Diesel particulate matter is of great concern.

Over its approximate one square mile, the downtown area, with over 15,000 residents, has the highest population density in the State. Resident incomes in sectors of Downtown are very diverse, covering a wide spectrum including underserved, low-income, cost-burdened renters. This population is subjected to the known health hazards of diesel particulates from a number of sources: TriMet diesel buses through, to and from the Downtown Transit Mall; diesel trucks that service the large Downtown population (garbage and recycling pick-up, deliveries to stores); aperiodic construction using diesel-engine-powered equipment; large diesel-powered trucks on I-5 and I-405 that ring the central city.

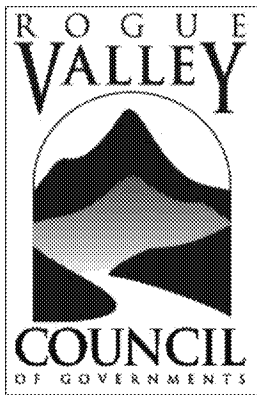
We stand ready to work cooperatively as part of DEQ's recommended Community Advisory Monitoring Group to establish a pilot program for Downtown Portland and the Portland Metro area at large. Presently, there are no stationary sensors/monitors in Downtown Portland that measure diesel particulate concentrations to EPA FRM/FEM standards. The pilot program will help determine what permanent, long-term measurement systems are required.

Sincerely,

Walter Weyler
Chair, DNA Board

Wendy Rahm
Vice Chair DNA Board

cc: Christine Kendrick, Smart City PDX Coordinator, Bureau of Planning and Sustainability
Nadège Dubuisson, Multnomah County Health Department, Environmental Toxics
Daniel Johnson, DEQ Air Quality Monitoring Specialist



Administration Office

Rogue Valley Council of Governments

(541) 664-6674 • FAX (541) 664-7927 • www.rvcog.org

February 24, 2022

*The Rogue Valley
Council of
Governments
is a voluntary
association of
these local
governments and
special districts
in our region:*

Jackson County
Josephine County
City of Ashland
Town of Butte Falls
City of Cave Junction
City of Central Point
City of Eagle Point
City of Gold Hill
City of Grants Pass
City of Jacksonville
City of Medford
City of Phoenix
City of Rogue River
City of Shady Cove
City of Talent
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Jackson County
Library District
Jackson Soil & Water
Conservation District
Rogue Community
College
Rogue Valley Sewer
Services
Rogue Valley
Transportation
District
Southern Oregon
Regional Economic
Development, Inc.
Southern Oregon
University

Oregon Department of Environmental Quality
700 NE Multnomah Street, Suite #600
Portland, OR 97232

Dear Administrator Mirzakhali,

I am writing on behalf of my organization to express support for the Oregon Department of Environmental Quality's proposals for the Environmental Protection Agency's Enhanced Air Quality Monitoring for Communities grant opportunities.

The greatest known health risk in Oregon is coming from PM2.5, formaldehyde and diesel PM. Communities also have concerns for acute health risk from local sources and do not have the ability to monitor for near real-time concentrations of toxic air contaminants. Communities need to understand the sources contributing to health risk in their communities in order to develop action plans to address them.

The proposed lending library of low-cost monitors for community-scale monitoring and the moveable monitoring platform for volatile organic compounds provide the necessary tools for Oregon communities to manage their own air quality. Local air monitoring data can help communities make decisions on how to reduce exposure and inform local and regulatory strategies.

We commend DEQ for their plan to partner with Oregon stakeholders to inform the design of the programs, establish monitoring protocols, prioritize communities for implementation based on environmental justice factors and provide roadmaps for local partners to translate data into action plans. DEQ's proposed Community Monitor Advisory Group provides Oregon communities a seat at the table to build, evaluate and evolve this program.

We are excited about the opportunity to have a lending library of monitors and movable monitoring program to manage air quality at the community level. My organization supports these efforts and welcomes the opportunity to partner with DEQ to create and implement these programs.

Sincerely,

Ann Marie Alfrey
Ann Marie Alfrey
Executive Director

155 North 1st Street • P.O. Box 3275 • Central Point, OR 97502

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